

Work Order ID 138021

138021

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Tuesday, October 20, 2015 2:27:11 PM

Item ID: D5039-1 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Chain

Start Date: 10/20/2015 Start Qty: 10.00 *10*

Required Date: 10/30/2015 Req'd Qty: 10.00 *10*

Reference: Cust Item ID: Customer:

Approvals: Process Plan:  Date: 10-20 Tooling: Date:

QC: Date: SPC (Y/N): Date: Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5039	B								

100 0.00

100

Purchasing

Purchasing

Memo

Issue P/O: 30221

Description: Chain

Supplier: McMaster

Supplier P/N: 6264K85

Material release note is required.

0.00

CD OCT 21 2015 10

110 Receive & Inspect for Damage & Mat'l Certs 0.00

110

Packaging

Packaging

Memo

TEST EACH CHAIN AS PER DWG, TEST TO 330#

0.00

10x SP 5-10-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																																																																																											
Environment	☐	Design	☐	Doc/Data	☐	Equip/Tooling	☐	Handling/Pre	☐	Material	☐	Internal Transport	☐	Tribal Knowledge	☐	LOA	☐	Substation	☐	Past Expiry Date	☐	Misidentified	☐	No Re-verification	☐	Operator	☐	Offset/Setup	☐	Supplier	☐	Training	☐	Use for Testing	☐	Poor Information	☐	Rushing	☐	Product Improvement	☐	Process Improvement	☐	Manufacturing Process	☐	Past Due	☐	Pressure/Forced	☐	Bending	☐	Centre Not Concentric	☐	Cracks	☐	Crimp/Kink/Ripple/Wave	☐	Cuffs	☐	Crushing	☐	Heat Treat	☐	Wave/Twist in Tube	☐	Marks/Chatter	☐	Temperature/Cure	☐	Set-up	☐	BOM/Route	☐	Broken/Damage/Defect	☐	Inspection Incomplete/Unqualified	☐	Contamination	☐	Countersink	☐	Cut Too Short	☐	Instructions Incomplete/Unclear	☐	Drill Holes	☐	Power Loss/Surge	☐	Folio/Program	☐	Grain	☐	Weld	☐	Wrong Stock Pulled	☐	Out of Sequence	☐	Off-set	☐	Mislabeled	☐	Fit/Function	☐	Misaligned/off center	☐	Positioned Wrong	☐	Outside Dimensions	☐	Over/Under tolerance	☐	Part Incorrect	☐	Part Lost/Missing	☐	Part Moved	☐	Drawing	☐	Finish	☐	Misread	☐	Turning Sequence	☐
OTHER :																																																																																																																															

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Page 2

Tuesday, October 20, 2015 2:27:11 PM

Item ID: D5039-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Chain
 Start Date: 10/20/2015 Start Qty: 10.00 *10* Cust Item ID:
 Required Date: 10/30/2015 Req'd Qty: 10.00 *10* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC6- Inspect dimensions to drawing Memo ***TEST EACH CHAIN AS PER DWG, TEST TO 330#***	0.00 0.00							DAS 38 9-89 OCT 27 2015
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <u>St143</u> Memo	0.00 0.00							OCT 28 2014 10 feet DAS 6 9-89
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.02							15/10/28 98

50151028

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
				OTHER : ☐							

Picklist Print

Thursday, October 20, 2015 2:27:22 PM

Page 1

Work Order ID: 138021

138021

Parent Item: D5039-1

D5039-1

Parent Item Name: Chain

Start Date: 10/20/2015

Required Date: 10/30/2015

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 14.05.26 NEW ISSUE/ECN14-567 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
6264k85		Purchased		No			f	0.0000		10			
6264k85									**				
Chain													

108015-10-27

DQA: _____ Date: _____



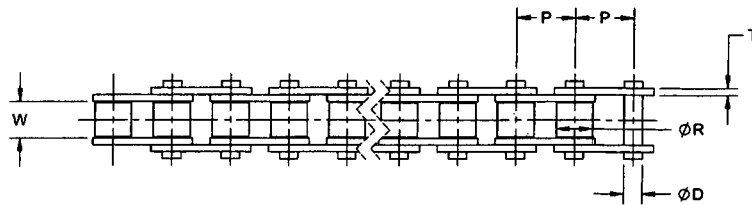
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

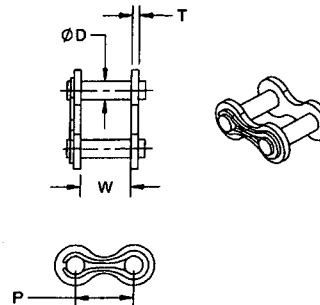
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
				OTHER : ☐							

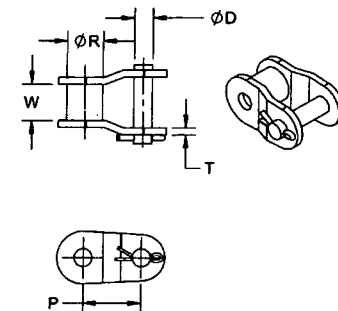
SPECIFICATION CONTROL DRAWING



D5039-1 CHAIN



D5039-3 MASTER LINK



D5039-5 HALF LINK

DART P/N	DESCRIPTION	MATERIAL	WEIGHT (LB/FT)	MANUFACTURER	MANUFACTURER P/N	VENDOR	VENDOR P/N	ALTERNATE VENDOR	ALTERNATE VENDOR P/N	P	W	T	D	R
D5039-1	CHAIN	304 SS	0.43	TSUBAKI	A140004	ACKLANDS GRAINGER	6L076	MCMaster CARR	6264K85	0.50	0.31	0.06	0.16	0.31
D5039-3	MASTER LINK	304 SS	0.43	TSUBAKI	RS40-SS-1	ACKLANDS GRAINGER	6L094	MCMaster CARR	6264K52	0.50	0.43	0.06	0.16	N/A
D5039-5	HALF LINK	304 SS	0.43	-	-	-	-	MCMaster CARR	6264K72	0.50	0.31	0.06	0.16	0.31

D5039-X CHAIN

NOTES:

- 1) MATERIAL: SEE TABLE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.7
- 7) WEIGHT: SEE TABLE

B	ADD ALTERNATE VENDOR: ZN B3-1, ADD -S; ZNB8-1, C2-1	VS	15.03.04
A	NEW ISSUE	AK	14.01.15
REV.	DESCRIPTION	BY	DATE
DESIGN	AK	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	AK	DRAWING NO.	REV. B
MFG. APPR.	JLM	D5039	SHEET 1 OF 1
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CHAIN	NTS
DATE	15.03.04	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2015-09-21
EEN 15-556

Handwritten: 15-10-20
138021

APPROVED



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO30221

Purchase Order Date 10/21/2015

PO Print Date 10/23/2015

Page Number 1 of 6

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMASTER-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED

Contact Name

Vendor Phone 330 995 5500

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Ship To Contact

Terms

Net 10

Ship To Phone

Currency

USD

Ship Via:

Purolator ground ppd

FOB

FCA - (Free Carrier)

Ship Acct:

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
Line Comments		Promise Date					
Delivery Comments							
1	6264k85	Chain	10/28/2015		10.00	\$18.73	\$187.30
			Yes		f		
			10/28/2015				
AS PER DWG D5039 REV. B B138021							
						Line Total:	\$187.30
2	16011-00	5709A52 BALL POINT HEX SET L-KEY	10/28/2015		3.00	\$15.40	\$46.20
			Yes		Each		
			10/28/2015				
						Line Total:	\$46.20
Deliver To: ERIC.L							
3	16011-00	5709A18 BALL POINT HET SET L-KEY	10/28/2015		3.00	\$12.52	\$37.56
			Yes		Each		
			10/28/2015				

Note:

10/23/2015

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO30221

Order Placed By
Chantal Lavoie

McMaster-Carr Number
2452334-01

Page 1 of 1

10/23/2015

Line	Product	Ordered	Shipped
1	6264K85 Highly Corrosion-Resistant Roller Chain, 304 Stainless Steel, ANSI #40-Stainless Steel, 1/2" Pitch, 10' LG	1 Each	1
2	5709A52 Ball-Point Hex Set, L-Key, 13 Piece, .050"-3/8", Plastic Indexed Caddy	3 Each	3
3	5709A18 Ball-Point Hex Set, L-Key, 9 Pieces, 1.5MM-10MM, Plastic Indexed Caddy	3 Each	3
4	5855A13 Ball Peen Hammer with Hickory Handle, 8 oz Head, 1" Face Diameter, 11-3/4" Overall Length	1 Each	1
5	5720A33 Cushion-Grip Screwdriver, 3/8" Tip Width, 8" Long Slotted Square Blade	3 Each	3
6	7260A222 Adjustable Wrench with Cushion-Grip, Black Finish, 6" L, 15/16" Jaw Cap	1 Each	1
7	98409A171 Zinc/Yellow Plated Steel Internal Retaining Ring, for 5/8" Bore Diameter, Packs of 50	1 Pack	1
8	59915K274 PTFE-Lined Stainless Steel Ball Joint Rod End, 3/8"-24 Right-Hand Male Shank, 3/8" Ball ID, 1-1/4" L Thread	18 Each	18
9	8491A812 Press-Fit Drill Bushing, 0.1875" (3/16") ID, 3/8" OD, 1/2" Length	10 Each	10
10	29415A55 High-Speed-Steel 1/2" Diameter Reduced-Shank Drill Bit, 1", 6" Overall Length, 2.10" Drill Depth	1 Each	1
11	10095K97 5' Length of 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 1	1 Pack	1
12	10095K24 1/4" Diameter Round Nozzle for 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 4	1 Pack	1
13	10095K21 1/8" Diameter Round Nozzle for 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 4	1 Pack	1
14	10095K17 1/16" Diameter Round Nozzle for 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 4	1 Pack	1
15	7736A86 TIG Torch, Water Cooled, Series No. 20, 25' Rubber Hose	1 Each	1
16	71455K58 Disposable Alkaline Battery, Size AA, Packs of 144	1 Pack	1

Notes about your shipment

The U.S. Department of Transportation regulates the shipping of line 16. By purchasing from McMaster-Carr Supply Company, you agree not to transport or permit others to transport purchased items except in accordance with U.S. law and any other applicable laws.